

REMARKS

Claims presented for prosecution in this Application are claims 12-17 and 21 -22, claim 22 being newly added by the present invention. Claims 12-17 and 21 have been rejected over cited prior art. In view of Applicant's remarks below, Applicant respectfully submits that claims 12-17 and 21-22 are now in condition for allowance. Accordingly, Applicant respectfully requests that the present Response be considered and entered, the rejections to the claims be withdrawn, and that the case now be passed to issue.

General Comments

Applicant wishes to thank the Examiner for the careful consideration of the previously filed arguments and the withdrawal of the previous outstanding prior art rejection. The Examiner's substantive evaluation of the previously cited prior art, as well as the points raised by Applicant in the last-filed Response, is most appreciated.

Moreover, Applicant is submitting herewith new, formal drawings in order to address the Examiner's concerns in this regard. Applicant therefore believes that the new formal drawings, in concert with the remarks below, now clearly express the subject matter of the present application, as well as overcomes the outstanding prior art rejection.

Interview Request

After consideration of the remarks contained herein, and should the Examiner not feel that the present application is substantially closer to Allowance, Applicant's Representative respectfully requests that the Examiner contact Applicant's Representative so as to agree on a time for an Interview in the present application.

Applicant's Representative believes that there exists significant differences between the cited prior art and Applicant's claimed invention, including a novel and unobvious leap forward in the motion picture/television arts, and that these differences

may be most clearly understood by a personal Interview, if the Examiner is not substantially convinced of the same after consideration of the remarks contained herein.

The Objections to the Drawings

The Examiner has required that new drawings be submitted and, in response thereto, Applicant is submitting new, formal drawings to address the Examiner's concern in this regard. Moreover, Applicant has also submitted a Petition to Accept Color Drawings to support the submission of color drawings, as also attached.

In consideration of the above remarks, and submission of formal drawings, Applicant therefore respectfully requests that the objections to drawings now be withdrawn.

The 35 U.S.C. § 103(a) Rejection of Claims 12-17 and 21 over Tamir in view of Reagan

The Examiner has rejected claims 12-17 and 21 as being obvious over Tamir in view of Reagan. Applicant traverses this rejection and respectfully asserts that neither Tamir nor Reagan, either alone or in combination, disclose each and every aspect of, at least, independent claims 12 and 21.

Both independent claims 12 and 21 presently recite, *inter alia*:

*"a base engaged with a movable dolly;
a boom arm pivotally mounted to the base;
a jib arm pivotally mounted to a distal end of the boom arm;
a recording apparatus mounting flange pivotally mounted to a distal end of the jib arm;
a counterweight system for counterbalancing the boom arm and jib arm;
a recording apparatus mounted to the recording apparatus mounting flange, the recording apparatus recording live character and set component images; and
a display disposed proximate to the recording apparatus, the display presenting substantially real time generated initial composite images indicative of the live character and set component images and computer generated images."*

That is, both claims 12 and 21 explicitly recite that the composite image (an image comprising substantially live character images combined with computer generated images) is displayed upon 'a display' of a recording apparatus which is 'mounted to' a boom/jib arm structure of a movable dolly (as generally shown in Figure 9).

In claims 12 and 21, therefore, having the composite (it) *display and recording apparatus* mounted at the end of a movable boom/jib arm structure, is explicitly recited. Applicant respectfully asserts that neither Tamir nor Reagan, either alone or in combination, teach or even suggest such a configuration.

To put one aspect of Applicant's invention in perspective, in the motion picture and television arts the combination of real-time images with computer generated images has been accomplished utilizing a variety of differing techniques, as seen in the cited prior art and, e.g., in Tamir which utilizes a known chromokeying system. Such systems have *always suffered*, however, because the composite image has typically been generated *away from* the location of the camera. This is true for stationary camera system, such as disclosed in Tamir, and is especially relevant in the realm of 'zero-gravity' video/motion picture shooting, or the like.

In such 'zero-gravity' situations, often utilizing known chromokeying techniques, the camera is mounted to a movable crane/dolly to shoot the live character images, commonly disposed in front of a blue-screen or the like, and transmits the same to a nearby location for subsequent combination with a computer generated image(s). This has proven to be a very expensive and time consuming operation, as the *camera* which is mounted to the movable crane/dolly has heretofore been incapable of associating itself with the *display of the real-time composite image* of the live character images and the computer generated images.

The present invention, therefore, has addressed these deficiencies in the art by proposing to combine both the shooting of live character images on a movable

platform *together with the real-time display* of the combination of these images with computer generated images, all on the same movable platform. There is no need, therefore, for a director to 'shoot' the live characters, retire to another location, review the combined images and - if necessary (and it often is) - reshoot the whole scene again until the proper combination of the images and their angular relationships are acceptable to the director.

The present invention therefore advantageously permits a director to ride along with, or position themselves close by to, the movable camera and composite-display screen *as the scene is shot*, so that changes, alternations, or re-positioning of the scene, camera, live characters or props may be accommodated in *real-time*, without requiring the laborious and expensive procedures previously known in the art.

Turning, then, specifically to Tamir, as discussed in the abstract, specification and claims, Tamir is merely concerned with a presumably novel method of perspective transformation as it is applied to known chromokeying techniques. That is, although Applicant arguably acknowledges that Tamir does disclose a composite image system *in general*, Tamir's teaching is limited to a stationary-camera, known chromokeying technique, that utilizes a presumably novel method of perspective transformation. In this regard, there is no disclosure within Tamir that the camera and a composite display screen are mounted adjacent one another at all. Indeed, Applicant respectfully asserts that Tamir's drawing figures and related disclosure speak *against* any such interpretation. Further, Applicant respectfully submits that Tamir's silence in this respect cannot be utilized to anticipate or render obvious explicitly claimed structural recitations as exhibited in claims 12 and 21.

The Examiner's attention is directed to Figures 1, 3 and 4, and column 4, lines 4-5. It will be readily appreciated that Tamir's method of perspective transformation as it is applied to known chromokeying techniques includes, and is limited to, the placing of cameras upon 'conventional pedestals', and does not in any way teach or suggest the application of Tamir's perspective transformation system to a movable platform. Nor,

as mentioned previously, does Tamir in any way address the mounting of a composite display screen on the same movable platform in association with the camera.

Moreover, Tamir does not address the problems in the art, as noted above, and certainly does not teach or suggest mounting a recording device and a composite display on the boom/jib arm of a movable platform so as to display in real time a composite image of live characters and computer generated images.

Indeed, as Tamir in no way teaches or suggests having the *display and recording apparatus* mounted at the end of a movable boom/jib arm structure, as explicitly recited in claims 12 and 21, Applicant respectfully asserts that Tamir cannot anticipate or render obvious these portions of claims 12 and 21. Moreover, as Reagan is merely directed towards a camera support apparatus having multi-arm motion, and speaks not at all to the combination of images in any manner, Applicant respectfully asserts that Reagan cannot supplement the deficiency of Tamir in this regard. Reagan is also notably devoid of any teaching of configuring any display screen, let alone a composite display screen, adjacent the camera mounted to the movable platform.

As Tamir does not disclose the mounting of a composite display screen adjacent a recording apparatus, and indeed given that Tamir's drawing figures and related disclosure indicate just the opposite, Reagan adding no pertinent disclosure in this regard, Applicant respectfully requests that the outstanding rejection of claims 12 and 21 be withdrawn on this basis alone.

Still further, Applicant respectfully submits that there is no teaching or suggestion within either Tamir or Reagan to support combining the two references in the manner proposed in the outstanding Office Action, pursuant to MPEP § 706.02(j). That is, there is absolutely no suggestion within either reference to support the proposition of mounting Tamir's stationary-camera and known chromakeying technique that utilizes a presumably novel method of perspective transformation, onto the movable platform shown in Reagan.

Applicant therefore respectfully requests that should the Examiner again combine the references in the manner previously proposed, or in another similar manner, that the Examiner specifically point out the following:

- 1) Where in Tamir the disclosure of mounting a composite display screen adjacent a recording device can be found; and
- 2) Where, in either reference, is it taught or suggested to place Tamir's chromokeying system on the boom/jib end of Reagan's movable platform.

Moreover, with respect to the recitation in MPEP § 706.02(j) that the suggestion to combine must either be found within the references themselves, "or in the knowledge generally available to one of ordinary skill in the art", Applicant respectfully asserts that the suggestion to combine Tamir and Reagan in the manner proposed in the outstanding Office Action was certainly not within the knowledge generally available to one of ordinary skill in the art. That is, and as discussed previously, although the composition of live character images with computer generated images has itself been known in the art, as have improvements upon the basic concept as evidenced by Tamir, the actual implementation of these systems has remained cumbersome due to the multitude of steps necessary to utilize and review the end-product of such systems - especially in the arena of movable platform, or 'zero-gravity', applications.

Applicant therefore respectfully requests that should the Examiner assert that such a combination was, in fact, within the knowledge of one of ordinary skill in the art, that the Examiner specifically point out the basis for such a conclusion. Further, should the Examiner take Official Notice of the same, or submit an Affidavit to this effect, Applicant respectfully requests that the Examiner cite a prior art reference in support thereof, pursuant to MPEP § 2144.03, Second Paragraph.

As Tamir in view of Reagan in no way teaches or suggests having the composite (it) *display and recording apparatus* mounted at the end of a movable boom/jib arm structure, as explicitly recited in claims 12 and 21, Applicant respectfully asserts that

Tamir in view of Reagan cannot anticipate or render obvious these portions of claims 12 and 21. Applicant respectfully requests that the outstanding rejection of claims 12 and 21, and those claims dependent thereon, be withdrawn on this basis alone.

With particular respect to the Examiner's assertion in the outstanding Office Action that "it is noted that the majority of motion picture cameras will inherently have a display associated proximate or attached to the camera" (noting Condrey), Applicant respectfully asserts that the issue is not as broadly framed as represented by the Examiner. That is, Applicant contends that the issue, as explicitly represented by claims 12 and 21 (and new claim 22), concerns a *composite* display screen intimately associated with, or mounted adjacent to, the recording apparatus.

As is evident from the great number of prior art references currently of record in the present application, there is no teaching or suggestion to have such a recording apparatus and composite display, displaying the combination of live character images and computer generated images, mounted together. And there is certainly no teaching or suggestion of mounting a composite display and recording apparatus on the distal end of a movable platform, as also recited in claims 12, 21 and new claim 22.

Applicant again stresses the unobvious nature of mounting such a *composite* display adjacent a recording apparatus, as such a configuration was heretofore unknown in the art, even though the teachings of Tamir and Condrey were of knowledge to those of skill in the art, and therefore represents a great stride forward in the advancement of real-time composite recording by not requiring subsequent review of the composite image at a location distant from the recording apparatus itself.

Applicant therefore again respectfully asserts that the combination of elements as recited in claims 12, 21 and 22 - when taken as a whole - clearly represents a novel method and apparatus not heretofore contemplated by those of skill in the art. Applicants' own tedious work in this field, and the efforts to design a configuration of elements to address the shortcomings inherent in known chromokeying techniques, and the like, speak to the unobvious nature of the claimed combination of elements as

recited in claims 12, 21 and 22. Applicant would be happy to provide an Affidavit to this effect, should the Examiner believe the same necessary to overcome the outstanding, or future, rejections based on the teachings of the cited prior art.

With particular respect to dependent claim 15, Applicant respectfully asserts that claim 15 recites a counterweight system and to "*provide substantially weightless movement of the recording apparatus and display*". As discussed previously, there is simply no teaching or suggestion to place a recording apparatus and composite display at the end of Reagan's movable platform, therefore Applicant respectfully submits that claim 15 is allowable for this reason alone.

Moreover, with particular respect to dependent claim 16, Applicant contends that neither Tamir nor Reagan discloses or suggests a "*jib cylinder ... responsive to jib arm position signals generated from the position control system*". The Examiner's assistance in pointing out where such elements can be found in either Tamir or Reagan, in the specific recitations as expressed in claim 16, would be appreciated should the present rejection be repeated.

Moreover, with particular respect to dependent claim 17, Applicant contends that neither Tamir nor Reagan discloses or suggests a "*counterweight jib arm for counterbalancing the jib arm, pivotally mounted to a distal end of the counterweight boom arm*". That is, the Examiner's assistance in pointing out exactly what the Examiner believes to read upon: 1) the boom arm; 2) the jib arm; 3) the counterweight boom arm; 4) the counterweight jib arm; and 5) how the 'counterweight jib arm' can be said to be 'pivotally mounted to a distal end of the counterweight boom arm', in consideration of Reagan, would be appreciated should the present rejection be repeated.

Applicant therefore asserts that neither Tamir nor Reagan disclose or render obvious the elements of, at least, dependent claims 15, 16 and 17, and respectfully request the withdrawal of the 35 U.S.C. § 102(b) rejection for these dependent claims on this basis alone.

Applicant earnestly believes that claims 12-17 and 21 clearly define over Tamir and Reagan. However, should the Examiner believe that there remains any outstanding issues, Applicant respectfully requests that the Examiner contact Applicant's Representative, to discuss an Examiner's Amendment or the like, so as to expedite resolution of these outstanding issues.

New Claim 22

Applicant has added new claim 22 to further define the scope of protection to which Applicant is entitled.

As presented herein, claim 22 explicitly recites:

*" a base engaged with a movable platform;
a boom arm pivotally mounted to the base, said boom arm having a distal end;
a recording apparatus mounting flange mounted to said distal end of said boom arm;
a recording apparatus mounted to the recording apparatus mounting flange, said
recording apparatus recording live character images; and
a composite display mounted to said distal end of said boom arm, said composite display
presenting substantially real time generated initial composite images indicative of said live
character images and computer generated images"*

That is, new claim 22 specifically recites that a composite display and a recording apparatus are mounted to a distal end of a boom arm, which itself is mounted upon a movable platform. In consideration of the remarks noted above, Applicant respectfully asserts that such a combination, when taken as a whole, cannot be reasonably interpreted as being taught or suggested by the cited prior art of record.

In this regard, Applicant notes MPEP §§ 2141.01 and 2141.02 which each indicate that, "it is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious" (emphasis in the original). Moreover, as it specifically applies to the claims 12, 21 and 22, Applicant respectfully asserts that the claimed combination of elements as a whole was not, in

fact, obvious to those of skill in the art. Further, Applicant respectfully submits that any determination to this effect is only apparent with the benefit of impermissible hindsight, which is also impermissible, pursuant to, *inter alia*, MPEP § 2141.01(a).

Applicant therefore respectfully submits that new claim 22 is clearly allowable over the cited prior art of record and an early action to that effect is earnestly solicited.

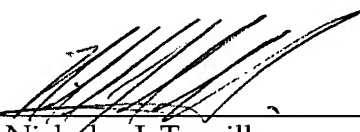
CONCLUSION

In view of the remarks above, it is respectfully submitted that claims 12-17 and 21-22 are allowable, and an early action to that effect is earnestly solicited.

The Examiner is invited to contact the undersigned at the number below to expedite resolution of any issues that the Examiner may consider to remain unresolved. In particular, should a Notice of Allowance not be forthcoming, the Examiner is requested to phone the undersigned for a telephonic interview, an Examiner's Amendment, or the like, while the outstanding issues are fresh in the mind of the Examiner.

Although no fees are believed to be due, authorization is hereby given to charge our Deposit Account No. 13-0235 with any required fees or to credit any overpayment in the above-referenced case.

Respectfully submitted,

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